



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/016,997 | 12/14/2001 | Susumu Taguchi | YOS0009 | 4987 |

832 7590 08/14/2003

BAKER & DANIELS
111 E. WAYNE STREET
SUITE 800
FORT WAYNE, IN 46802

EXAMINER

BEFUMO, JENNA LEIGH

| | |
|----------|--------------|
| ART UNIT | PAPER NUMBER |
|----------|--------------|

1771

DATE MAILED: 08/14/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|--|---|---|--|
| <p align="center">Office Action Summary</p> | <p>Application No.</p> <p align="center">10/016,997</p> | <p>Applicant(s)</p> <p align="center">TAGUCHI ET AL.</p> | |
| | <p>Examiner</p> <p align="center">Jenna-Leigh Befumo</p> | <p>Art Unit</p> <p align="center">1771</p> | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 December 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 December 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. Preliminary amendment A, submitted on December 14, 2001, has been entered. Claim 4 has been amended and claims 5 and 6 have been added. Therefore, the pending claims are 1 – 6.

Priority

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference signs not mentioned in the description: a (Figures 1, 3, and 12), W1 (Figure 2), H1 (Figure 2), PCD (Figures 5, 7, and 8), C (Figure 7), 5 (Figure 8), 6 (Figure 8), and I (Figures 10(g) and 11(b)). A proposed drawing correction, corrected drawings, or amendment to the specification to add the reference signs in the description, are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

4. The drawings are objected to because it is unclear if reference sign P in Figure 6 refers to the pitch between the strands as in Figure 12, or to something else. If P in Figure 6 refers to something else the Applicant will need to use a different reference sign. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

5. A substitute specification in proper idiomatic English and in compliance with 37 CFR 1.52(a) and (b) is required. The substitute specification filed must be accompanied by a statement that it contains no new matter.

Claim Objections

6. Claim 1 objected to because of the following informalities: the phrase "the said" is redundant. The Applicant should use only "the" or "said". Appropriate correction is required.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 1 – 6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

9. The phrase "said foamed strands have different ratios of height size to width size" in claim 1 is indefinite. What are the ratios different from? Does each individual foam strand have a different height to width ratio? Or does the height to width ratio of the foam strand differ along the length of the strand? Claims 2 – 6 are rejected due to their dependency on claim 1.

10. The phrase "the longitudinal direction of the cross section form has an angle of 45 to 90 degrees to a face of the net in a meshed shape" in claim 1 indefinite. It is unclear what cross section the Applicant is referring to. Is it the cross section of the mesh fabric? Is the angle referring to the angles formed by the intersection of the foam strands? What angle is being measured? For purposes of examination, this limitation is being interpreted as meaning the angle

Art Unit: 1771

formed between the foam strands at the intersections points must be between 45 and 90 degrees.

Claims 2 – 6 are rejected due to their dependency on claim 1.

11. The phrase “said foam strands is configured so that an end of a vertical lines of character T may be aligned at the intersection point side” in claim 3 is indefinite. Is the Applicant claiming the foam strands are intersected to create a “T” shape? What is the “T character” being aligned with? Is the Applicant claiming that a “T shaped” character is being added to the mesh layer? It is unclear where the “T character” is located and how it is aligned with the foam strands. Claim 6 is rejected due to their dependency on claim 3. Accordingly, claims 3 and 6 has not been further treated on the merits.

12. The phrase “said ratio of height size to width size is set in a range of 1.1 or more to 4.0 or less” in claim 4 is indefinite. It is unclear what the Applicant is limiting the ratio to since the height size can be 1.1 or higher and the width size can be 4.0 or less. Therefore, the range would include circular as well as elliptical fibers since the ratio can be 4.0 to 4.0. Further, it is unclear which direction the Applicant is considering the height of the fiber. Would the height measure the longer axis of the fiber’s cross section, or would that be the width? Claims 5 and 6 are similarly rejected. For the purposes of examination any round fibers would meet this limitation since the ratio can be 1.1 to 1.1 or 4.0 to 4.0, which would produce a round fiber. Also, elliptical fibers would have the claimed ratio also since the height component is not limited, thus the larger length can be 5, 10, or even 100 times larger than the smaller length to meet this limitation.

Claim Rejections - 35 USC § 102

13. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

Art Unit: 1771

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

14. Claims 1, 2, and 4 – 5 are rejected under 35 U.S.C. 102(b) as being anticipated by JP 11005282.

JP 11005282 discloses a mesh layer made from foam strands which can be placed between two outer cloth layers (abstract). The mesh layer is integrated by fusion, adhesion or stitching (abstract). Additionally, the Applicant discloses that JP 11005282 uses round and elliptical fibers (Specification, page 2, 1st paragraph). Additionally, Figure 1 shows the mesh can be formed with the fibers at about 90 degrees to each other at the intersection points. Therefore, claims 1, 2, and 4 – 5 are rejected.

15. Claims 1, 2, and 4 – 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Okie et al. (4,144,371).

Okie et al. discloses a mesh layer made from foamable fibers (abstract). The fibers are flattened at the intersection points to form the elliptical cross-section shown in Figure 2(c) as the fiber is expanded (abstract). Therefore, the height to width ratio of the fiber varies along the length of the individual fibers. With respect to the limitation that the mesh is used between two outer cloth layers, the Applicant has not positively claimed the outer cloth layers, and this limitation is considered to be intended use. Therefore, the prior art does not need to teach that the foam layer is between two outer cloth layers. Thus, claims 1 and 2 are anticipated.

The fiber has areas with round cross-sections and areas with elliptical cross-section which would read of the ratio limitations set forth in claims 4 – 5. Therefore, claims 4 – 5 are anticipated.

Claim Rejections - 35 USC § 103

16. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

17. Claims 1, 2, and 4 – 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Penrose (WO 96/03100).

Penrose discloses a foam netting comprising a first set of parallel filaments bonded to a second set of bonded parallel filaments where the first set of filaments is angled with respect to the second set of filaments (abstract). As shown in Figure 3, the filaments can be angled at about 90 degrees. With respect to the limitation that the mesh is used between two outer cloth layers, the Applicant has not positively claimed the outer cloth layers, and this limitation is considered to be intended use. Therefore, the prior art does not need to teach that the foam layer is between two outer cloth layers.

Finally, Penrose does not teach the shape of the fibers. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to choose an elliptical foam strand with the claimed height to width ratio, since such a modification would have involved a mere change in the shape of a component. A change in shape is generally recognized as being within the level of ordinary skill in the art. *In re Dailey*, 357 F.2nd 669, 149 USPQ 1966. One of ordinary skill in the art would be motivated to change the size of the foam strands to modify the weight or thickness of the mesh layer. Therefore, claims 1, 2, and 4 – 5 are rejected.

Art Unit: 1771

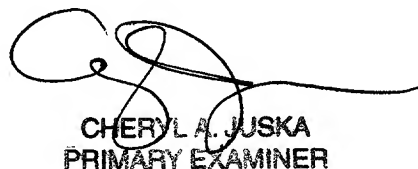
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jenna-Leigh Befumo whose telephone number is (703) 605-1170. The examiner can normally be reached on Monday - Friday (8:00 - 5:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on (703) 308-2414. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Jenna-Leigh Befumo
August 8, 2003



CHERYL A. JUSKA
PRIMARY EXAMINER